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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,490	03/08/2004	William W. Rowley	39288-0180	2489
24115	7590	02/27/2006	EXAMINER	
BUCKINGHAM, DOOLITTLE & BURROUGHS, LLP 50 S. MAIN STREET AKRON, OH 44308			JIMENEZ, MARC QUEMUEL	
			ART UNIT	PAPER NUMBER
			3726	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rowley (US5861200) in view of Rowley (US6270125).

Rowley '200 teaches a tube **102** comprising an inner polymeric tube (37) within an outer metallic tube (158) (for example in figure 27). Because the outer tube (158) is a metal sleeve, it will not sag.

Rowley '200 does not specifically teach joining the tube (102) to another tube and does not explicitly disclose limitations of a connecting means as claimed.

Rowley '125 discloses a connecting means (20) having the claimed geometry and function. Note, Figures 1-2 of the instant application are identical with regard to the connection means (20) to Figures 1-2 of the '125 patent, which illustrate the claimed steps a-d. That is, one end of connecting means (20) having a ribs (26, 28, 22) is inserted into tube (12) while a sealing means (30) is positioned to form a leak-proof crimping; the other end of connecting means (20) is inserted into tube (16) with a sealing means (30) positioned to form a leak-proof crimping effect. The use of connecting means (20) as disclosed by Rowley '125 is advantageous in that it provides improved elastic characteristics thereby providing an improved connection as well as aesthetic appeal (column 1, lines 30+).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to join an inner polymeric tube having an outer metallic tube as disclosed by Rowley ('200) to another of such tube configuration with a connection means taught by Rowley ('125) in order to realize the advantages above.

Regarding claims 24 and 28, Rowley '200 discloses post-processing to effect contact between the polymeric tube & metallic tube (column 6, line 8).

Regarding claims 1-2 and 29-30, Rowley '200 discloses inserting a polymeric tube within a metallic tube which inherently requires the polymeric tube to be of a smaller diameter. Further, the Rowley '125 patent discloses reducing the diameter of the metallic ring (via crimping means 30) to equal the diameter of the inner polymeric tube.

Regarding claims 3 and 31, Rowley '200 discloses extruding the polymeric tube prior to inserting (column 6, line 3).

Regarding claims 5-6, 32-34 and 43, Rowley '200 discloses cutting a polymeric tube after extruding (column 6, lines 3+) and fully inserting said polymeric tube into a metallic tube (Figure 27).

Regarding claims 7, 16 and 35, Rowley '200 discloses a process for fabricating which comprises the steps (a) reducing an outer diameter of at least a partially cross-linked polymeric tube from a first outer diameter to a smaller second outer diameter (column 13, line 55), (b) inserting cross-linked a length of said at least a partially polymeric tube having a polymeric tube at least partially into a length of a metallic tube having a metallic tube internal and external diameter, said metallic tube internal diameter being larger than said polymeric tube second outer diameter and approximately equal to said first outer diameter of said at least partially cross-

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linked polymeric tube; and (c) heating said tubes so that said partially cross-linked polymeric tube expands in diameter to approximate said first outer diameter (column 13, lines 56-63).

Regarding claims 8-11, 36-42 and 45-48, Rowley discloses 50%-100% cross-linked polyethylene tubes (column 15, lines 12-18) which are extruded prior to or after reducing (column 6, line 3).

Regarding claims 4, 12-15 and 17-20, Rowley discloses extruding prior to reducing & cutting the tube (paragraph 13, line 65).

Regarding claim 44, Rowley discloses sealing an end of the polymeric tube, heating said tube, and expanding said tube via pressurization (column 14, line 3 wherein it is inherent that a seal must be established within a tube in order to pressurize said tube).

3. **Claims 49-54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rowley in view of Rowley (US5861200) in view of Rowley (US6270125) as applied to claims 21 and 25 above, and further in view of Brown et al. (US6260414).

Rowley '200/Rowley '125 teach the invention cited with the exception of adding a colorant to at least a portion of the inner polymeric tube.

Brown et al. teach that it is known to add a colorant in polymeric material to indicate temperature changes (col. 4, lines 8-12).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Rowley '200/Rowley '125 with a colorant, in light of the teachings of Brown et al., in order to determine temperature changes in the tube.

Whether the colorant is invisible or visible when exposed to visible illumination is an obvious matter of design choice because either types of indicators solve the same problem of indicating a change in temperature.

Response to Arguments

4. Applicant's arguments filed 12/2/05 have been fully considered but they are not persuasive.
5. Applicant argues that the '200 patent would necessarily have the feature of "belling or compressive sealing surface formation" or "end-formation". However, the claims are open ended and do not preclude addition all structure such as this feature.
6. Applicant argues that in the '125 invention, the connectors are to be made of the same polymeric material as the tubes. However, the claims are open ended and do not preclude this feature.
7. In response to applicant's arguments against the references individually (in the response, page 12, lines 18-32), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).
8. In response to applicant's argument that "the invention resides in eliminating the need for soldering of copper pipes together", the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for

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patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227

USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

9. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

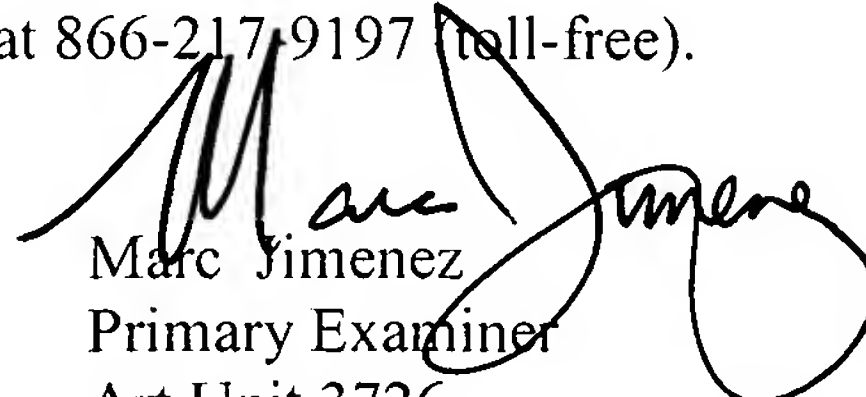
Interviews After Final

11. Applicant note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing) to clarify issues for appeal requiring only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on (571) 272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Marc Jimenez
Primary Examiner
Art Unit 3726
2-16-06

MJ